Frankly Speaking

Preparing for the Future

THE annual meeting of the Institute of Traffic Engineers, held in Chicago early this month, was one of the most successful in the Institute's history. It marked an auspicious start of the Institute's 14th year of steady progress and constructive activity.

The importance of the twelve months ahead cannot be overestimated. The crucial world situation reflects directly upon the Institute's program and calls for intensified and important work. There is a great deal that should and must be done in our own field. It has a direct bearing upon our nation's war strength.

While urgent and immediate war transportation problems will comprise the major objective of the Institute, plans will also be inaugurated for the post-war era. One long-term objective that must constantly be before us is broadening the vision and increasing the services of the traffic engineering profession.

But even though we are planning for the future, we realize fully that we are nowhere near "over the hump" in conquering our war transportation problems. It would be the height of folly not to realize that this coming winter may be the worst, in regard to street and highway transportation, we have yet seen. To help meet the problems of the coming months, and also as a follow-up on the Yale-Eno War Worker Transportation Study and Report, a special War Transportation Committee for 1944 has already been set up under the chairmanship of T. M. Matson of the Bureau for Street Traffic Research.

Post-war traffic planning is receiving and will continue to receive increasing attention from traffic engineers, highway engineers, planning officials, architects, and other interested professional persons. The Institute's Post-War Traffic Planning Committee for 1944 is headed by D. Grant Mickle, who has had wide experience in post-war traffic planning matters.

The Institute's determination to push ahead vigorously throughout the coming year is evidenced by the fact that the Board of Direction has already appointed Chairmen for all 1944 I.T.E. committees. Certainly this prompt action, which has eliminated the time lag that usually occurs at the beginning of each administrative year, should aid greatly in stepping-up the quantity, quality, and prompt completion of work undertaken.

It is planned to develop even closer relations between the Institute and its members. We are searching continually for ways to knit our organization more closely together and to make the I.T.E. more effective. Every constructive suggestion is welcome. Closer relations are certain to result from the sectional meetings which are being planned and which we hope will be held regularly. In at least one area, plans have already been made for the first "get-together".

The active cooperation already established with Federal and other agencies dealing with wartime traffic and transportation problems, will be continued and expanded. Ahead lie crucial months of hard work. We are confident that the Institute of Traffic Engineers, collectively and individually, will meet the challenge successfully.

Harold V. Hammond

President.

HIGHLIGHTS OF THE FOURTEENTH ANNUAL MEETING

CURRENT AND FUTURE TRAFFIC ENGINEERING PROBLEMS

CHICAGO newspapers featured the the activities of the Institute of Traffic Engineers in their news reports. One heading read: "Traffic Chiefs Lay Plans for Post-War Rush". The article continued as follows: "Urban traffic will be extremely serious right after the war, and a means of 'decongesting' our important streets and highways to make them accident proof should be found now," Harold F. Hammond of New York, new president of the Institute, said yesterday. "Streets are no good unless they will carry traffic expeditiously and safely." Objectives of a post-war traffic plan, he said, must include a system of speedier traffic flow from urban centers, better parking facilities, through traffic highways, safer streets, and separation of foot and vehicular traffic.

Current and Future Traffic Engineering Problems

The above subjects were discussed by a panel consisting of Harold F. Hammond, I. S. Shattuck, E. H. Holmes, Robert M. Mitchell, Harry E. Neal, and Lawrence S. Waterbury and the following conclusions were drawn:

War Transportation conservation measures will be vitally important in the coming winter months. The tire situation is giving the military forces concern, and gasoline and parts supplies are still scarce commodities in the civilian economy.

War speeds are on the increase: Some states have higher speeds than before the national 35 m.p.h. limit was invoked. Accidents on rural highways are down to a percentage equivalent to volume decreases. Exposure rather than reduction in speeds was advanced for the reduction of accidents.

Post-war speeds are expected to be higher. Expressways and especially open country roads will be designed for greater speeds. Attention must be given to speeds in residential districts. Lower speeds will be more difficult to enforce and it is unlikely that speed limits will be reduced. Greater care will be necessary in the issuance of driver licenses, for average speeds will be higher and more cars will be moving at 50, 60 and 70 miles per hour. Speed enforcement should be governed more by the conditions of the highway in the future.

Medial strips with a minimum width of 15 feet should be used in new highway construction. Experience has shown that very few cars cross the medial strip and therefore the use of guard rails for medial protection should not be employed except possibly on curves. A mountable medial strip is better than an obstacle in the center. Shrub planting is acceptable in the strip. In designing the medial strip the amount of turning traffic, its protection, the verticality of the curbing, speed of traffic, width of adjacent lane, etc., should be carefully studied.

Signs of the near future are not expected to be plastic. If colors could be molded into the plastic sign it would have certain advantages. Obstacles to plastics at the present are poor lasting qualities, brittleness, susceptibility to puncturing with stones, and expense. Signs with center illumination show up best especially in rural areas. Signals will have greater flexibility and will conform more to hour-by-hour and minute-by-minute changes in traffic.

Vehicles in the future will probably be able to accelerate and decelerate more quickly but the design of the truck will probably affect the design of the future highway more than other factors. Consideration for the existing highway system is likely to bring forth some control of vehicular design.

Super-highway systems should be designed so as not to destroy the urban tax structure. Suitable controls of the use of adjacent land should be applied. In any case urban super-highway systems will aid people to move out. There seems to be no necessity for separate truck routes and the building of high or low level super-highways is an admission of some defect in the system. The ideal super-highway is on the level and provided with grade separations. At present only 5,000 miles of super-highways is contemplated in urban areas and only as a last resort should they be designed as high and low level highways. The large percentage of super-highways will be rural. Utilities are a major factor in depressed highways and they have a depressing effect upon the driver.

Terminals relocated and rearranged for an interchange of freight would reduce street congestion and eliminate the necessity for building a large number of off-street loading facilities. "Decongesting" urban streets and the provision of adequate terminal facilities are major post-war traffic planning problems.

Transportation Facilities in the Future American City. Mr. Walter Blucher, Director of the American Society of Planning Officials, offered food for thought in his paper presented at the Annual Meeting of the Institute, especially when he stated that cities are for people to live and work in—happily and conveniently. One primary idea was that traffic engineers cannot hope to cure the traffic accident problem by treating only the symptom, but rather should probe the causes of traffic accidents and congestion—namely, the movement of persons and goods. Mr. Blucher emphasized the fact that the designing or planning of a city is the result of a compromise or mutual arrangement of land uses and the circulatory system serving the land and population pattern.

Much of present-day movement is, according to Mr. Blucher, unwarranted and causes unnecessary clogging of the city's circulating system. By functional planning, persons could be freed of this daily criss-cross movement by the planning of living space nearer places of work. Planning for traffic should be functional in that it gives consideration to urban redevelopment and of the people for whom the planning is being done.

Mr. Blucher thinks the place of the super-highway in urban redevelopment is in the short-haul service with much thought being given to the development of adjacent areas. Super-highways of the radial and inter-mediate haul type encourage decentralization thus making it easier for the white-collar worker to move out further. The final result of such traffic planning can result only in community bankruptcy. Movement per se is no virtue and transportation is no social cure.

Cities, says Mr. Blucher, should be designed for the least amount of movement between home and work, and cultural facilities.

If there must be movement, it should be by the most efficient and convenient method.

If people insist upon using private vehicles when more efficient facilities are available, they must give way to the mass transportation facility. In the latter case there must be the least possible obstruction to the free movement of vehicles.

Mr. Blucher's paper illustrated clearly the impossibility of considering traffic problems separately from the problem of community development.

Traffic and City Planning. Mr. Alfred Shaw, senior partner of Shaw, Naess and Murphy, a prominent Chicago architectural firm now engaged in planning and building housing for Chicago's new war plants, presented some thought-provoking questions in his paper on "Traffic and City Planning".

Probably because the city planners and the traffic engineers deal with the problem of moving people and goods and in so doing use the same surveys and technical procedures, he stated that traffic and city planning are not two subjects, but one. However, during the course of his talk Mr. Shaw conceived the traffic problem as a duel one in which the city planner should be concerned mostly with the elimination of unnecessary traffic through the provision of better housing facilities near places of work and adequate recreational facilities near the workers' homes. The traffic engineer should be primarily concerned with the proper handling of all necessary traffic, or what is left.

Mr. Shaw recognized that there were times when city planning and traffic engineering functions would overlap and be indistinguishable as, for instance, in time planning to reduce week-end and daily congestion through the staggering of employment week-ends and, presumably, the opening and closing hours of business concerns.

Also it was suggested that the city planner and the traffic engineer might give some thought to the provision of high quality transit service at higher rates rather than to continue to reduce the quality of service in order to provide a minimum rate, such as a five-cent fare. Mr. Shaw cites the salesmanship and ingenuity of the automobile and radio industries. He presumably includes the building of such monumental motorways as are found in Chicago, New York and Los Angeles urban areas.

No attempt was made to discuss technical applications but emphasis was laid on the human or general aspects of the traffic problem, even to the suggestion that a more nearly perfect approach to the solution of the traffic problem would be found in the planning, design and construction of self-contained urban units, within our metropolitan areas — each containing sufficient residential, commercial, industrial and recreational activities for daily living.

Industrial Development and Community Planning. Mr. George H. Miehls, Vice-President, Albert Kahn Associate Architects and Engineers, Inc., of Detroit, Michigan, retraced the events leading to the present conflict and projected his thoughts into the post-war period on things to come. The kernel of Mr. Miehls' paper was the preparation now for the peace which is inevitable. He implies that it will be necessary to maintain, at least for the first years of peace, the tempo of wartime which compresses a lifetime of effort into a few short years. This he feels will be necessary to defeat our enemies from within— inflation, unemployment, poverty and hunger.

Mr. Miehls outlined the attention given to site values in war-plant building and, among other things, he emphasized the fact that the site should be within a radius of adequate manpower, be served by adequate transportation facilities that get the worker to the plant and home again with the least confusion and congestion and within the shortest possible time, and that the site must be of sufficient size to permit the construction of parking lots of ample dimensions so that the employee may arrive and depart from

his place of employment in a safe and expeditious manner.

It has been shown that if given adequate transportation facilities the source of available manpower in the immediate vicinity, while desirable, is not a prime necessity. In the post-war period, we were reminded that the transportation of workers will be largely by automobile but if public transportation can provide dependable, comfortable and speedy service it will be largely patronized. Plant sites served by modern roads and public transportation of the above type are more desirable than those served only by automobile.

The functional design of adequate parking space was greatly emphasized and it was indicated that the provision of sufficient parking place will be considered, in the future, as integral a part of the plant as the locker and toilet rooms, first-aid, hospital, cafeteria and other services.

Following hostilities we will not return to the pre-war status of doing things. Political and economic control and leadership, Mr. Miehls believes, will be retained to assist private enterprise and defeat inflation and unemployment. Of the 50 million jobs which will be made available the government will employ only those needed for the construction of capital improvements which were curtailed by the war, such as street and highway construction, public utilities, waterfront developments, recreational needs and airports and housing where private capital is not available.

War lowers our living standards and destroys wealth. The backlog of domestic demand for products and the expanding market for the products of American industries augers well for the future of America. An industrial renaissance is visualized by Mr. Miehls in which industry will move to the outskirts, followed by an army of workers now living in congested city tenements, and thereby provide an unusual opportunity for city rebuilding according to a Master Plan. Mr. Miehls asks if we should expend less effort for the greater benefits of peace.

"Chicago Plans," by H. Evert Kincaid, Executive Director of the Chicago Plan Commission, brought out, among many other important points, that a Master Plan is an integrated series of studies and conclusions on every phase of community activity—housing, health, sanitation, railroads, rapid transit, airports, highways, parking terminals, traffic control, schools, playgrounds, industry, commerce, police and fire protection, and every other major function affecting the welfare of public and private interests. It is also a comprehensive program which involves every community activity, public and private, in accordance with the most practical standards which will benefit the most people.

Obviously, a Plan Commission cannot possibly be so wise or so able as to solve all of the problems involved in such a wide and varied program. It must depend on established sources to supply information and ideas. This is the policy adopted by the Chicago Plan Commission.

In devising a Master Plan to guide Chicago's future growth, it is of fundamental importance to consider the strength of the basic economic background factors. The Chicago Plan Commission first approached this problem by estimating the future Chicago population on the basis of the employment capabilities of Chicago's industry and trade.

Having determined the relative importance of each basic source of employment in Chicago, the decks have been cleared for the fundamental task of analyzing the power of each basic source of jobs to give more employment in the future. Results thus far indicate that the employment prospects of both industry and trade will

support a population of approximately 3,600,000 people in 1965. To house this population 500,000 new dwelling units will have to be constructed during the next 25 years.

Chicago now has 242,000 dwelling units in the blighted areas that are mainly old and dilapidated structures and 108,000 more dwelling units in buildings more than 50 years old. There are few people who will not say that all of these 350,000 superannuated homes should be cleared away within the next 25 years and a solid foundation laid on which to build.

Terminal Facilities & The Union Square Garage in San Francisco, by Ross T. Shoaf (Assoc. I.T.E.), Assistant Traffic Engineer, San Francisco, California. Mr. Shoaf's paper illuminated some of the fundamentals in planning central business district parking facilities as derived from a survey conducted at the Union Square Garage in San Francisco. This garage is built below a public park by right of the city to lease the sub-surface for garaging purposes, providing the surface remained a city park. Its location is in the center of downtown San Francisco. In 1938 the Union Square Garage Corporation had prepared preliminary designs and methods of financing. Apparently the size of the four-story, sub-surface structure was determined more by the economics of construction than estimates of patronage on account of its central location. Its capacity is 1,700 stalls and the average attendance for a day in August was 200 monthly stalls and 2,200 in-and-out patrons. The rates are: twenty-five cents for one hour, thirty-five cents for two hours, and fifty cents for all-day parking.

The Union Square Garage has four entrances and exits. A recent peak, half-hour check showed a delivery rate of thirty seconds per car, per lane. The motorist's average waiting time, after paying the cashier, is approximately nine to ten minutes in the peak and three to five minutes in the off-peak periods.

The Union Square Garage Corporation holds the park sub-surface for a term of fifty years at a rental of $5,000 per annum. The project cost $1,500,000 and it is anticipated that the city will become the sole owner of the garage structure in a much shorter time than the fifty-year period. A separate corporation operates the garage.

The results of the recent survey show, among other things, that:

1. 75 per cent of the shoppers, business people, persons visiting doctors, etc., and using the garage, consider a four to five block walking distance, or approximately 1,800 feet, as a reasonable distance.
2. 34 per cent of the patrons were shoppers, 38 per cent were business people and 20 per cent were visiting the doctor, dentist, etc.
3. 32.5 per cent formerly parked at the curb, 40 per cent used other garages and lots. (Several parking garages in the downtown district have been taken over by the military forces.) 5.0 per cent did not drive before, and 22.5 per cent were from out of town, or had moved to San Francisco since the Union Square Garage had been in operation.

In general, it was felt that in planning parking terminals the size and location of garage, rates, and other elements should be related to the point of diminishing returns in resisting decentralization.

Uses of Traffic Surveys and Studies in Planning, by Theodore M. Matson (Mem. I.T.E.), Director, Bureau for Street Traffic Research, Yale University. Traffic engineers have had little concern with city planning and planners have had little concern with traf-

fic operation. This situation is unfortunate, according to Mr. Matson, since traffic engineering techniques fit into many aspects of city planning and traffic engineers can render considerable service to society by assisting in the planning of street and highway developments of the future.

Mr. Matson described the planning values of various traffic engineering investigations, such as volume, origin and destination, speed and delay studies, cordon counts, as well as parking and loading surveys. These studies have considerable value when viewed from the standpoint of the planning of future development.

At a recent Seminar held at Yale University on Traffic Engineering in the post-war era, it was concluded that the chief objectives of post-war traffic engineers should be the "decongesting" of urban areas and the "accident-proofing" of streets and highways. To accomplish these objectives, increased attention must be given to the operational and performance values in the location and design of future highway structures. Thus, it is seen that traffic engineers are definitely confronted with the problem of interpreting the planning values which grow out of highway operation experiences. To accomplish this purpose, traffic engineers must learn to speak the same language as planners and to interpret the economic and design values which grow out of highway operation.

Highway Transport Operations Overseas. Major Arthur G. Siegle of the Highway Division, Army Transportation Corps, discussed in his paper the differences between domestic highway transport and highway operations overseas.

The outstanding characteristic of overseas highway transport is that all of the many engineers and specialists engaged in highway transport work closely together, developing a much better understanding and appreciation for each other's work. Through such cooperation Major Siegle feels we will be better able to direct future efforts toward insuring the most economic utilization and development of all forms of transport.

A major problem in overseas traffic is the rapid shifting of large concentrations of personnel. Another is the patterns of existing highways overseas which can hardly be expected to provide facilities for supplying operations at the front. The problem is the direct opposite to normal peacetime traffic problems. Instead of determining what facilities should be provided for traffic that must be served, the determining factor is the amount of traffic that can be moved over existing facilities.

In his description of actual overseas transport operations Major Siegle emphasized the need for the selection and careful marking of all military routes and a simple, yet positive, dispatch and control system.

Accurate dispatch and control systems are of tremendous value in making efficient use of vehicles and roads. "The ordinary reaction of the uninitiated," said Major Siegle, "may be that such things would not be important overseas where it might be assumed that two-fisted, strong arm methods are the only means of accomplishing the impossible. Quite the opposite is true. Motor vehicles occupy valuable shipping space and cannot be provided in excess of minimum requirements. Personnel must be spared to maintain figures on loading, unloading, rolling times, and over-all turnarounds by truck per shift as a means of detecting flows which must be ironed out to attain smooth and efficient operation. Truck hour availability must be balanced against truck hour use, and other relationships must be carefully analyzed. A failure to recognize this requirement prevents

employment of the only means to move maximum tonnage with a minimum of equipment and personnel."

"Scheduling, dispatching and controlling road movements is a necessary undertaking overseas which has no parallel in domestic highway transport operations. Virtually all vehicles moving on main lines of communication are assigned a space on the highway and enough space is allowed between units to prevent accumulating delays. Control stations are located along the main lines of communication to implement scheduling and control of over-the-road movements and to render reports. These stations are connected by telephone with central dispatching and control offices which assign the space and authorize changes necessary toward improving smooth flow of vehicles. Only in this way can there be any hope of developing use of the road to the maximum working capacity."

I. T. E. ACTIVITIES AND PERSONALS

Annual Meeting

THE 14th Annual Meeting of the Institute of Traffic Engineers in Chicago, Oct. 9, 10 and 11, met with all around success. GRANT MICKLE, Traffic Engineer, Automotive Safety Foundation, handed over the gavel to his successor, HAROLD F. HAMMOND, Director of the Traffic and Transportation Division of the National Conservation Bureau. New Vice-President THOMAS SEBURN, Traffic Engineer of Kansas City, and new Secretary-Treasurer WILBUR SMITH of the Yale Bureau for Street Traffic Research, also took office. At the business meeting a rousing vote of appreciation was accorded GRAHAM COLE, retiring Secretary - Treasurer, (Safety Director, Metropolitan Life Insurance Company), for his three years of untiring service. New board members elected were JOSEPH WEHMEYER, Safety Engineer of Wayne County, Michigan, and ROBERT A. MITCHELL, Traffic Engineer for Philadelphia, Pennsylvania. The Proceedings will be rushed into completion under the capable editorship of WILLIAM B. POWELL, Consulting Traffic Engineer of Buffalo, New York.

New Chairmen of Committees

New chairmen of the 1943-1944 I.T.E. committees, chosen by unanimous approval during the Monday business meeting, are as follows: Annual Meeting, Co-Chairmen, EDWARD H. HOLMES (Senior Engineer-Economist, PRA, Washington, D. C.), and MATTHEW C. SIELSKI (Assistant Director, Safety and Traffic Engineering Department, Chicago Motor Club); Auditing Committee, MERWYN A. KRAFT (Secretary, Transit Manpower Committee, American Transit Association); Membership Committee, VIRDEN A. RITTGERS (Spring Valley Coach Co., New Milford, N. J.); Nominating Committee, GUY KELCY (Assistant Director, ODT Division of Local Transport, Atlanta, Ga.); Policy Committee, BURTON W. MARSH (Director, Traffic Engineering and Safety Department, American Automobile Association); Post - War Planning Committee, D. GRANT MICKLE; Proceedings Committee, WILLIAM B. POWELL; Committee on Sale of Publications, GEORGE J. FISHER (Assistant Traffic Engineer, Division of Traffic and Safety, Ohio Department of Highways); Standards and Specifications Committee, MARTIN E. BRUENING (Traffic Control Engineer, Bureau of Electrical Service, Milwaukee, Wisconsin); Street and Highway

Lighting Committee, HOWARD F. ILGNER (Supt. and Chief Engineer, Milwaukee Bureau of Electrical Service); Traffic Control and Facilitation Committee of American City Magazine, WILLIAM R. MCCONOCHIE (Traffic Engineer, Chicago Surface Lines); Traffic Engineering Magazine, LESLIE WILLIAMS, Editor (Director, Civic Planning Traffic Board, Providence, R. I.); Traffic Engineering Training Committee, W. GRAHAM COLE; War Transportation Committee, THEODORE M. MATSON (Director, Yale Bureau for Street Traffic Research, New Haven, Conn.).

The Policy Committee will be composed entirely of past presidents of the Institute, and it will handle matters of policy, financing, and suggested I.T.E. projects. There will be no committee on cooperative activities, however, Vice-President Seburn will be in charge of these.

New Members

Also at the business meeting the following were voted membership in the Institute with the grade of Associate Member: SIDNEY A. ANGER, Traffic Engineer for Lansing, Michigan; HENRY A. BARNES, Traffic Signal Engineer, Flint, Michigan; MATTHEW KRAG, Traffic Planning Supervisor, Chicago Park District. Admitted as Junior Member was JAMES A. HEAD, Engineering Supervisor, Oregon Highway Department. HENRY K. EVANS, Traffic Engineer, National Conservation Bureau, was raised from the grade of Junior to Associate Member.

Post-War Planning

The Board of Direction of the Institute is now making a detailed study of the I.T.E. Post-War Program, and it is anticipated that this program will be made available to the members in the very near future. This will be along the lines of the principles developed at the Yale University work conference a month or so ago, and will encompass both the objectives of the Institute as a society and traffic engineering as a profession.

News From Here and There

T. M. MATSON reports that all members of the Institute will receive a complimentary copy of the complete report on war transportation which is being put into the mails even as this is being written . . . CAPT. CHARLES BECHENBACH (Mem.), of the Army Transportation Corps, has been transferred from Washington, D. C., to Dallas, Texas. He is on leave from Cincinnati, where he was City Traffic Engineer . . . VIRDEN RITTGERS (Mem.), formerly with the Evacuation Transportation Section of OCD in Washington, D. C., is now with the Spring Valley Coach Company in New Milford, New Jersey, as operations engineer. Before being with OCD, Rittgers was Traffic Engineer for San Antonio, Texas, and Richmond, Virginia. . . . PRESIDENT HAROLD HAMMOND and HAWLEY SIMPSON (Past President), Research Engineer, American Transit Association, recently completed a city-wide staggered hours survey and report for Rochester, New York. Commenting on this, Joseph B. Eastman, Director of ODT, said, "I am particularly impressed by the fact that peak hour traffic is estimated to be reduced by approximately 18% through this plan" . . . RAY F. RIEGELMEIER (Mem.), Traffic Engineer for the Pennsylvania Department of Highways, reports that in September his services were loaned to the Pennsylvania State Council of Defense as Plant Protection Officer and Illumination Control Officer . . .R. B. LUCKENBECH (Assoc.), District Traffic Engineer, California Division of Highways, San Diego, California, is now with the Army Transportation Corps. . . . HENRY OSBORNE (Mem.), City Traffic Engineer of Buffalo, New York, reports that he had quite a workout during his recent 10-day en-

campment with the New York State Guard. He is a Second "Looey" . . . PAUL STRICKER (Affil.), formerly Director, Division of Safety Councils, National Safety Council, is now Managing Director of the Greater New York Safety Council . . . LIGHT B. YOST (Affil.), on leave from General Motors Corporation, writes from the Mediterranean area, "Have gone through my second invasion O. K. . . . look forward to participating in the third . . . I left Africa on the invasion of Sicily as Highway Transport Officer . . . now with the Seventh Army . . . MAJOR KIRK KEEGAN now with me as assistant and also CAPTAIN OSCAR GUNDERSON as my traffic engineer . . . tremendous job of signs and markings, traffic regulations, etc. . . . have a staff of 8 officers and operating group of 50 officers and 200 enlisted men" . . . Over 20% of the Institute Members are in the Armed Forces with many of them holding high ranking positions in the Army Transportation Corps . . . GRANT MICKLE (Mem.), formerly Detroit City Traffic Engineer, and now Traffic Engineer for the Automotive Safety Foundation, Washington, D. C., is assisting Syracuse, New York, in the traffic and transportation phase of its post-war planning program . . . WILBUR SMITH'S (Mem.) new assistant on I.T.E. secretary-treasurer matters is Miss Geraldine Nye. Miss Nye will be stationed in New Haven, at the Yale Bureau for Street Traffic Research, however, the official headquarters of the Institute remains at 60 John Street, New York 7, N. Y.

Mr. Russell Harrison (Assoc.I.T.E.) recently accepted the position as Traffic Engineer with the National Safety Council, 20 North Wacker Drive, Chicago, 6, Ill. Mr. Harrison was formerly City Traffic Engineer, Kalamazoo, Michigan.

Activities and Personal Items Wanted

Starting with this issue of Traffic, it is planned to include an enlarged section dealing with I.T.E. news and personal items. Cooperation of the members is earnestly sought to furnish interesting items about I.T.E. members, new jobs available, traffic engineering activities and surveys being carried on, etc. Send information direct to the Traffic News Editor, Henry K. Evans, Institute of Traffic Engineers, 60 John Street, New York 7, N. Y.

TRAFFIC VOLUME TRENDS

Highway traffic decreases in April 1943 were approximately equal to those of February and March; in each case the comparison is with traffic in the corresponding month of 1942. Preliminary data for April indicate decreases in traffic using each category of highway. For State highways, local highways, routes in the area rationed in May 1942, and routes in the area rationed in December 1942, the April decreases are each remarkably similar to the corresponding decreases in March, although there are wide differences in the decreases for the several groups of roads. Again in April, traffic on local highways shows much less decrease than that on State highways.

April 1943 traffic in the Atlantic seaboard area is less than 50 per cent of traffic in 1941, while in the remainder of the country it is nearly two-thirds that of 1941.

Traffic volume observed in April at toll facilities was also well below that of April 1942, although the decline is generally less than that at the automatic traffic recorder stations; and at a number of toll facilities with heavy traffic volume, truck and bus traffic in 1943 exceeds that of 1942.

PUBLIC ROADS ADMINISTRATION

FACT FINDING STUDIES FOR IMPROVING WAR TRANSPORTATION

by HAROLD F. HAMMOND
Director, Traffic and Transportation Division, National Conservation Bureau

THOSE persons who are charged with the responsibility of improving worker transportation must constantly be on the alert if they are to keep abreast of their problems. This requires constant spot-checking of conditions in the field and periodic review of transportation facts.

Important questions which must be considered are:

1. Do you know the bottlenecks in your local or plant transportation system, and are you taking positive steps to eliminate them?
2. Are you taking positive measures to correct accident locations which are robbing you of valuable workers and automobiles?
3. Have you estimated how many persons in your plant or community will require transportation three and six months from now?
4. Have you considered how many registered automobiles in your plant or city will be out of circulation six months from now?
5. Have you developed a program to compensate for automobile losses: by increasing transit capacity or by group-riding?
6. Do you maintain a detailed plan of remedial steps that should be taken if and when a sudden transportation shortage should occur in your plant or city?

War Transportation studies receiving special attention today may be divided into five general categories:

1. War worker route studies including:
   a. Extent to which the O.D.T. Traffic Control Policies have been correctly applied.
   b. Physical condition of signs, signals and markings.
   c. Locations of accidents and congestion.
2. Transit studies including:
   a. Transit loads.
   b. Transit delays.
   c. Staggered hours.
   d. The extent to which O.D.T. transit policies have been effectively applied in the community.
3. Automobile movement studies including:
   a. Vehicle occupancy and group-riding.
   b. Speed.
   c. Volume.
   d. Origin and destination of worker traffic.
4. Parking studies including:
   a. Studies of curb parking conditions created by a large downtown war plant.
   b. Analysis of the plant parking lot.
5. Automobile maintenance studies including:
   a. Automobile age and maintenance.
   b. Maintenance facilities.
   c. Gasoline consumption and tire condition.

H. F. Hammond is President of the Institute of Traffic Engineers and his services have been used extensively by war agencies on employee transportation problems.

DIMOUTS PROVE IMPORTANCE OF *Traffic Safety Lighting*

Woman Killed By Hit-and-Run Auto in Dimout
Dimout Made 'Safe' But Cars Kill 4 More
Dimout Traps 2 In Times Square
AUTO HITS 4 BOYS IN DIM-LIT 2D AVE.
Hit-Runners Kill Two, Hurt 1 in Dim Streets
Cars Kill 3 in Murky Dimout
Traffic Accidents Cost Four Lives In Heaviest Rain
Dimout Blamed In Boy's Death

NIGHT ACCIDENTS ON THE INCREASE!

NEWSPAPER headlines reveal what happens in cities when street illumination is dimmed. In spite of *reduced* traffic volume and *decreased* daytime accidents, night accidents have *increased*. For example, traffic deaths in one western city for the first four months of this year rose almost 70 per cent above the 1942 figure. Of these deaths, 88 per cent occurred at night. Crime waves have sprung up where they seldom appeared before. "Muggings" have recently caused loss of life.

For the duration, the toll of night traffic deaths can be lessened only by strict observation of dimout safety regulations on the part of drivers and pedestrians alike. Peace will bring the obligation and the opportunity to reduce night accidents through a program of modern traffic safety lighting, whose beneficial effects were just beginning to be realized before "Pearl Harbor." The engineering services of the General Electric Illuminating Laboratory are available to assist you with your planning. *General Electric Company, Schenectady, N. Y.*

The best investment in the world is in this country's future — BUY WAR BONDS

GENERAL ELECTRIC

454-22D-3010

EMPLOYEE TRANSPORTATION

by Lt. Colonel Arnold H. Vey
Transportation Corps

THE Transportation Corps of the United States Army has a vital interest in employee transportation problems involving directly or indirectly the war effort. It is the purpose of the Transportation Corps to avoid congestion and delay, and to avert a breakdown in transportation facilities resulting in a breakdown in war production.

To insure continued essential transportation, the Transportation Corps encourages the establishment and maintenance of employee transportation departments in all war plants where such departments are considered necessary.

Plant Transportation Departments have a dual task, first—take the necessary steps to make available essential transportation to meet existing needs, and second—to develop and encourage adequate conservation measures to "stretch" transportation facilities for the duration of the war.

For the most part, the first task has been well done. With regard to the latter task, however, most departments have just scratched the surface.

The battle of transportation shortages is not yet won. Although it may be true that the passenger tire situation looks brighter at least for next year, the gasoline problem becomes more acute with increasing military demands and, with the passing of each day, irreplaceable civilian cars leaving the road for the junk pile.

With increasing demands on both public and private transportation facilities, particularly the former, plus inadequate replacement of worn-out equipment, the employee transportation problem is becoming increasingly serious, potentially. Short of an abrupt ending of the war within the next few months, the only solution is the adoption and strict observance of intense conservation measures, including restrictions designed to limit materially, if not entirely, all non-essential use of transportation facilities. These conservation measures include staggering of hours, group-riding, tire maintenance and private car maintenance.

Transportation ranks equally with production and combat—for without supplies our combat forces could not succeed.

Fluid employee transportation is essential to production.

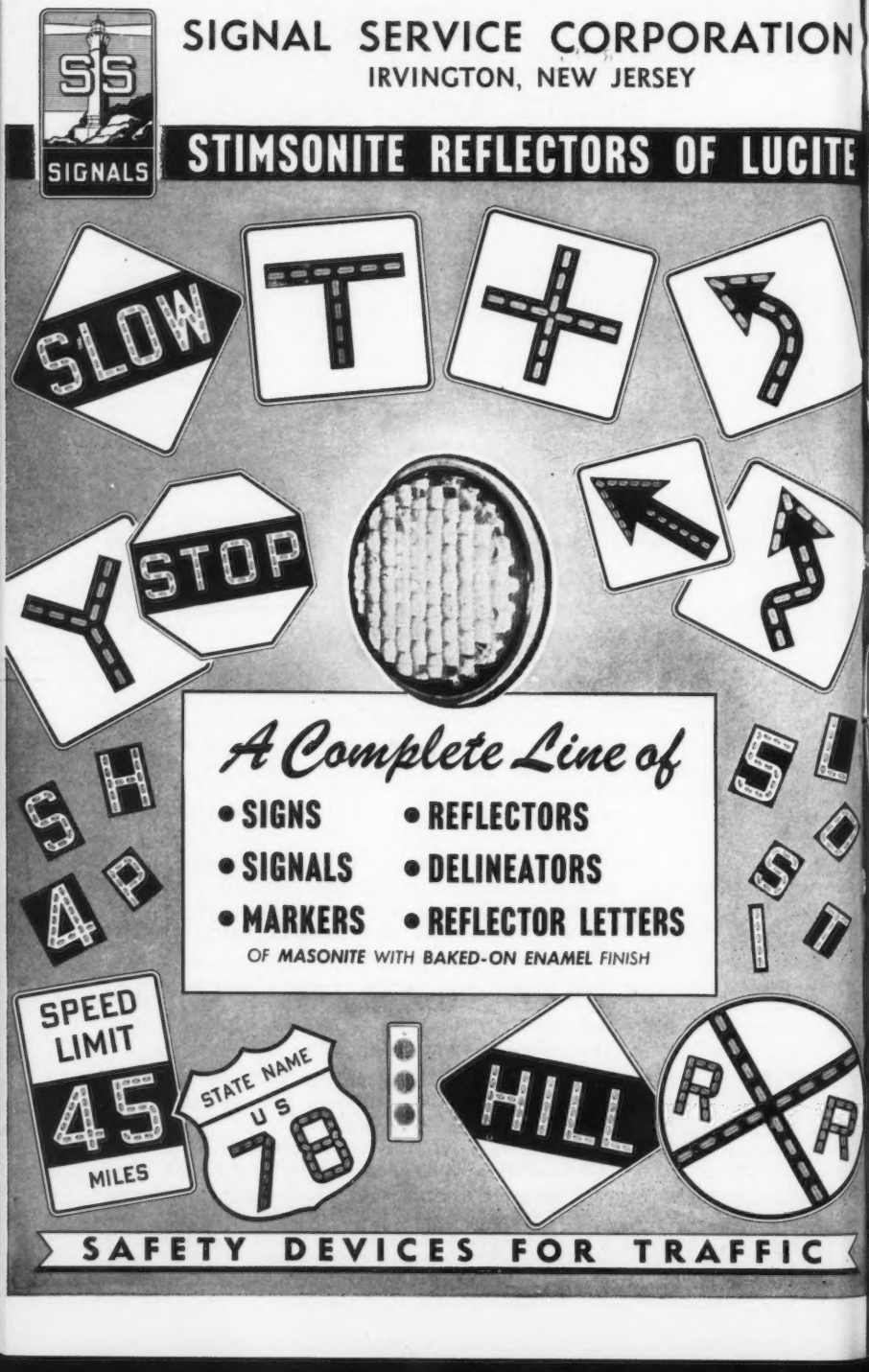
To compensate for transportation shortages and to insure essential employee transportation for the duration, it is necessary that we stretch and squeeze, crowd and adjust the facilities now available until, truly, the "ends do meet".

APPLYING ODT POLICIES ON WAR TRAFFIC CONTROL

by T. J. Seburn (Vice-President, I.T.E.)
Traffic Engineer, Kansas City, Mo.

THE application of ODT Policies on War Traffic Control is merely a practical application of good traffic administration. Mr. Seburn felt that much aid can be derived from these policies by authorities who have been saddled with unnecessary or obsolete equipment, regulation or lack of regulation, and who have not had enough public support to make changes that are needed.

The ODT program suggests the elimination of stop signs and signals that are not needed to provide for safe and orderly control of traffic. A large proportion of signals probably do not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SAFETY DEVICES FOR TRAFFIC

meet the minimum requirements of traffic volume or accident hazard to justify their use. The ODT policy presents an excellent opportunity to renovate traffic signal systems and remove the excess baggage.

Other points in the program result in a saving of time and conservation of transportation equipment by using flasher operation of traffic signals wherever possible, by using shorter signal cycles, by adjusting time allotted to the green period to the time required to move cross traffic, and by adjusting the cycle lengths to fluctuations of the demand during different periods of the day.

To provide for continuous movement of all vehicles on a thoroughfare, the ODT suggests that isolated fixed time signals within one-quarter mile of one another be coordinated wherever possible.

Another point in the ODT program that is of extreme significance deals with Traffic Regulations. Restriction of turns is mentioned as a regulation that will often facilitate the flow of traffic through an intersection. From the standpoint of conservation of motor vehicles and tires and to eliminate unnecessary delay and accident to war needed travel, perhaps the most effective tool in the hands of the traffic authority is the proper use of through streets.

The matter of vehicle parking and the attendant debate about the division of street space between the movement of traffic and the temporary storage of vehicles is also worthy of serious consideration.

In addition to the 12 points mentioned in the ODT policy, Mr. Seburn felt that the proper use of one-way streets should also merit some consideration even though it is not specifically mentioned as one of the ODT policies.

PROVIDING OFF-STREET PARKING TERMINALS

by D. Grant Mickle

IN a thorough study of the entire parking problem consideration must be given to the whole urban problem of land use, decentralization, blight and the over-all problems of the urban dilemma.

Off-street parking may be divided generally into private, privately operated public facilities and public facilities.

Private parking is often provided as an inducement to renting building space. Stalls are rented on a monthly basis and are not open to the general public.

The privately operated public facility provides the largest capacity of off-street parking in downtown areas. Motorists pay direct or business firms may validate all or part of the fee upon purchase of goods.

Public or municipal off-street parking is not common. Some cities provide free service, some finance lots through parking meter revenue, and others operate them on a self-sustaining fee basis.

Little planning is incorporated into the location or design of most parking lots. The future will bring more municipal lots from tax delinquent land, parcels remaining from some previous public work project, or as gifts. Fees, if these plots of land are taken out of competition, need not be high nor include high tax costs. Based on the theory that the whole city would benefit, a certain part of the costs might be charged against the general tax levy.

The costs of private parking and the privately operated public facility are often borne by all the tenants of an office building, visitors at a hotel or all the purchasers at a department store to which it is attached.

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WHAT'S DOING IN THE CENTRAL BUSINESS DISTRICT?

by A. WALLACE GOVE

THE net capacity of off-street private parking lots has increased 27% in the central business district of the City of Worcester in the past 3 years. In the same period public parking lot capacity has increased in a smaller degree, and the public garage capacity has decreased slightly. All lots not open to the public for general use, such as those reserved for customers of a particular store, are classed as private. *Not one off-street parking lot, public or private, has reverted to another use in three years.*

Original data concerning street and off-street facilities was gathered three years ago by a general city-wide traffic survey. The recent follow-up survey of parking facilities gathered data on location and capacity only, as gas rationing and the ban on pleasure driving has curtailed the use of autos considerably.

The principal sponsors of new lots and of expansion of existing lots have been banks. A cooperative bank has doubled its parking area adjacent to its office. One commercial bank established a 45 stall lot with a small branch building having an inside counter and a drive-in teller's window. Contrary to the bank officials' expectations, the drive-in window is much more popular than the inside counter where the driver first parks his car and then enters the building. Unfortunately, the driveway entrance from the street to the teller's window is short and the exit is long, a condition which should be reversed to eliminate a line of cars extending into the street.

Another commercial bank has provided a free lot for customers within 300 feet of the bank. This lot serves over 1,000 customers per week. Here the normal parking time ranges between 7 and 11 minutes.

All bank lots have a free parking period of 20 to 30 minutes with a high fee charged thereafter.

Other new parking lots include those reserved for employees, or for store customers. One lot for doctors' cars has been created immediately adjacent to a Medical Arts building.

The one reduction in garage parking capacity has been made by the conversion of a second floor storage area into a roller-skating rink.

The new parking lots which receive the greatest use are located within one block of the concentrated war-time successful business area which is described below.

The street parking regulations for the entire business district have been reviewed as a result of the original traffic survey in 1940. The new regulations are based on the requirements of moving traffic and involve many changes. Due to legal, financial and other considerations, the actual changes in the signs on the street have taken place principally during May and June 1943. These changes make a reduction

CHANGES IN CAPACITY OF OFF-STREET PARKING FACILITIES
June 1940 — June 1943

Facility	*Stalls*	*Percent Change*
Private Lot	Increase 273	+27
Public Lot	Increase 124	+ 7
Public Garage	Decrease 38	— 1.4
Total Off-Street	Increase 359	+ 6.7

of 385 legal curb stalls which is 17% of the legal curb parking in the central business district. The new regulations have not been in effect long enough to cause additional pressure for off-street development, especially as they are going into effect during a period of light auto travel.

This new reduction in street parking capacity is slightly greater than the off-street increase of 359 stalls which has occurred during the past three years. As there has been no appreciable change in enforcement policy prior to the most recent changes in the street regulations, the off-street increase may be charged to normal development in this day and age. The recent stringent changes in street parking regulations will undoubtedly give further impetus to the trend in off-street development. The present ratio of off-street stalls to curb stalls is about 3 to 1. Three years ago it was 2.3 to 1.

Concentrated Wartime Business Area. The wartime successful shopping area under the conditions of restricted private car travel, shortage of help and curtailment of goods is quickly revealed by a field survey involving a few man hours. Stores, barber shops, restaurants, one after another, are closed along the ribbon developed arteries leading to the central district. As the heart of the business district is approached, a point is reached where there are no more vacancies with the familiar "For Rent" signs. In Worcester, the concentrated successful area includes the banks, the department stores, and the principal office buildings. *At no point does the successful area extend greater than one block from the main mass transit lines.* At many points the distance is not greater than one-half block.

One successful sub-district exists a short distance to the southwest of the main district. In this area are large super markets with ample off-street parking provisions, and a relatively new Sears-Roebuck store with its customary parking lot. Between this thriving area and the main business area lies a small section with several vacant stores surrounding the main post office.

Conclusions. In drawing conclusions from the above, it should be noted that Worcester has a population of 193,000 and is enjoying a war boom by the intensification of existing industries with little new factory construction. Prior to the war curtailment of housing construction, large developments were under way in outlying areas both within the city limits and in suburban towns within ten miles distance.

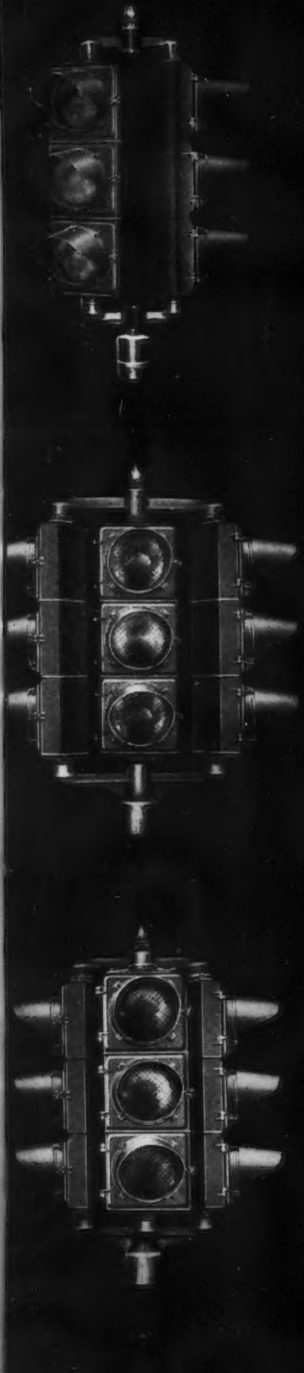
1. The forces now at work are making many changes in our central business district. Off-street parking facilities are being created at a fairly rapid rate.

2. Off-street parking lots once created are not being abandoned.

3. The concentrated central business area, worth saving by the provision of more off-street terminal facilities, is now more or less defined by the economics of wartime business and curtailed transportation facilities.

4. Downtown buildings, unless equipped with good elevator service, are economically valuable only at street level. The pressure of business economics is causing the elimination of upper floors which are not readily accessible.

(EDITOR'S NOTE): A. Wallace Gove (Assoc. I.T.E.) is on leave of absence from his post as City Traffic Engineer of Worcester, Mass., and is now on active duty with the Transportation Corps, U. S. Army. In the short time Lt. Gove occupied the position as Traffic Engineer of Worcester one-third of the signals have either been extinguished or placed on flashing operation. All other signals are on flashing operation during light traffic periods (usually 8 P.M-6 A.M.). Bus and street car stops in the downtown area have been separated with buses loading at the curb. Sept., 1943.



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MAINTENANCE OF TRAFFIC DURING CONSTRUCTION IN THE VICINITY OF WAR INDUSTRIES

THE close proximity of five major war industries near State Route US 25 at Lima, Ohio, created an unexpected overloading of the city, county and state highway facilities in this area. To reduce this congestion and thus to provide more adequate access facilities for the war workers, a construction program of highway widening and resurfacing which involved three of the four sides of a rectangular system of roads and streets around this area, was adopted, approved and awarded.

It was, of course, necessary for workers to get to work each day, consequently traffic had to be maintained and not detoured during construction.

Adoption of a few of the fundamentals of good traffic house cleaning helped to keep traffic under control. With stage construction of one-half of the pavement at a time and with alternate shifting of traffic from one side of the pavement to the other, the construction was completed without any serious traffic delay to either the contractor or the workers.

The Division of Traffic and Safety and the Bureau of Construction of the Ohio Department of Highways made a study of shift periods of the various plants, the car occupancy of the workers' cars, the periods of maximum activity during shift changes and the available parking capacity at the individual plants. As a result of this study, the following corrective measures were adopted to temporarily reduce to a minimum the interceptions to traffic flow and thus to relieve traffic congestion.

Definite plans to coordinate peak traffic flows with the different stages of construction were provided. Contained in the plans were provisions for proper signs and markings, for adequate lighting and for trained watchmen and flagmen.

All industries were forewarned of changes in the routing of traffic so that their employees could adjust their driving accordingly when the changes were put into effect.

Parking within the right of way of State Route US 25 was prohibited.

U-turns by commercial and private vehicles were prohibited.

Buses and private cars were loaded and unloaded on the property of the industry and not within the highway right of way as had been done previously.

Each industry encouraged its employees to increase their car occupancy.

Where a deficiency in parking space existed, the responsible industry provided additional parking facilities.

All entrance and exit gates to parking areas were used specifically for either entering or leaving only, thereby reducing conflict points.

Traffic officers were trained in their duties with particular emphasis on courtesy and encouragement to drive safely.

The contractor insofar as practicable arranged his periods of maximum intensity of work to avoid the peak hour of traffic flow.

Excellent cooperation by the contractor, industries, city, county and the State Highway Department in the joint adoption of the above details contributed greatly to the continuity of traffic flow during construction.

Submitted by Harry E. Neal (Mem. I.T.E.), Chief Engineer, Division of Traffic and Safety, Ohio Department of Highways.